

KBR:kbr 08/09/04 298762
PATENTAttorney Reference Number 1011-57071-01
Application Number 09/919,650**REMARKS**

Applicants respectfully request reconsideration in view of the foregoing amendments and following remarks.

Claims 1-35 and 42-48 are pending. In the Office action dated April 7, 2004 ["Office action"], the Examiner rejected claims 1-35 as being unpatentable over selected pages of Marmel, Microsoft Project 2000 ["Marmel"] in view of selected portions of Elliott, "An Introduction to Architectural Exploration" ["Elliott"]. Applicants respectfully disagree.

I. Restriction Requirement

In the Office action, the Examiner imposed a restriction requirement, dividing the claims into two groups. Group 1 includes claims 1-35, and group 2 includes claims 36-41.

By telephone on March 30, 2004, the undersigned attorney elected the claims of group 1 with traverse. Applicants respectfully disagree with the characterization of the claims and the reasoning behind the restriction requirement in the Office action, but affirm the election of group 1. To expedite prosecution, Applicants have canceled claims 36-41 without prejudice to renewal.

II. Marmel

In the interest of reaching a shared understanding of the disclosure of Marmel, Applicants make the following observations.

Marmel describes various aspects of Microsoft Project 2000. In particular, Marmel describes Gantt charts for project management. [See Marmel, pages 6-8.] A project includes tasks that have real world durations and tasks that have zero duration (called "milestones"). [Id.] After a task is performed once, it is completed. [Marmel, pages 6-8, 16, and 17.]

Tasks that have durations may be organized as summary tasks and subtasks. [Marmel, pages 50-51.] A summary task has one or more subtasks. [Id.] The summary task is presented as a solid black line of the Gantt chart, with one downward arrow marking its beginning and another marking its end. [Id.] "The timing of the summary task reflects the total amount of time required to complete the subtasks." [Marmel, page 50.] In other words, the durations of the subtasks override the otherwise assigned duration of the summary task, and if the duration of a subtask is changed, the summary task duration may change accordingly.

KBR:kbr 08/09/04 298762
PATENTAttorney Reference Number 1011-57071-01
Application Number 09/919,650

The timing for the Gantt charts appears to follow a single calendar line above all of the task bars. [See Marmel, Figures 1-1, 1-2, 1-3, 1-7, 9-10, 9-11, and 9-12.] The Examiner asserts in the Office action that the "8/27" and "9/3" labels shown in Figure 9-12 are additional calendar lines, but Applicants do not find any support for that assertion in the portions of Marmel provided to Applicants by the Examiner. It is not clear, but the "8/27" and "9/3" labels may be names of data fields associated with specific summary tasks, but the summary tasks themselves appear to always follow the single calendar line above all tasks.

Marmel describes features for progress tracking in Gantt charts. [Marmel, pages 16-17.] In particular, Marmel describes shading task bars to show percentage complete and presenting percentage figures next to task bars. [Marmel, Figure 1-7.]

III. The Examiner has improperly combined Marmel and Elliott.

The Examiner's combination of Marmel and Elliott is improper for at least the following reason. In rejecting claims 1-35, the Examiner modifies the Gantt charts in Marmel to include the "use of loops" as in Elliott. [Office action, pages 4, 7, and 9-11.] These modifications change several principles of operation of the Gantt charts in Marmel, and hence the Examiner's modifications are improper. [See MPEP 2143.01, "THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE."]

The Marmel Gantt charts for real-world project scheduling in which tasks are performed once and finished. In contrast, loops in Elliott denote iteration or at least the potential for iteration (not just single-pass performance). [Elliott, Part III.] Modifying the Marmel Gantt charts to use loops as in Elliott changes a principle of operation of the Marmel Gantt charts. What is being timed in the Marmel Gantt charts and the loops in Elliott is different in terms of its non-iterative vs. iterative nature.

Moreover, the Marmel Gantt charts organize tasks along a timeline with a scale of months and days (or potentially hours and minutes). In contrast, loops in Elliott are organized along cycles or control steps (not months, days, hours, minutes or another human project time scale). [Elliott, Part III, 3.5.1.] Modifying the Marmel Gantt charts to use loops as in Elliott again changes a principle of operation of the Marmel Gantt charts. What is being timed in the Marmel Gantt charts and the loops in Elliott is different in terms of its scale.

Claims 1-35 should be allowable.

KBR:kbr 08/09/04 298762
PATENT

Attorney Reference Number 1011-57071-01
Application Number 09/919,650

IV. Each of claims 1-12 recites language that Marmel and Elliott, taken separately or in combination, fail to teach or suggest.

Claim 1 recites, "displaying a first loop schedule for a first loop, wherein timing within the first loop schedule is presented relative to the first loop schedule." Marmel and Elliott, taken separately or in combination, fail to teach or suggest the above-cited language of claim 1.

Against the above-cited language of claim 1, the Examiner cites (1) the "9/3" and "8/27" labels of Marmel Figure 9-12, (2) the percentage complete feature shown in Marmel Figure 1-7, and (3) "selection of a sub-element" in Marmel causing time to be "displayed relative to the sub-element." [Office action, page 3.]

Applicants address these three parts of Marmel below. First, however, Applicants note that the Marmel Gantt charts cited by the Examiner all relate to tasks that are performed once and then finished. The tasks in the Marmel Gantt charts are not performed iteratively. Marmel thus leads away from the "loop schedule" and "loop" language recited in claim 1.

As to the first part of Marmel cited by the Examiner, Applicants do not see where Marmel describes "9/3 and 8/27 not being relative to the upper timeline but to its own line," as the Examiner writes. [*Id.*] Rather, the summary tasks associated with the "9/3" and "8/27" labels appear to follow the main calendar line, with "9/3" and "8/27" acting as description. Having a single calendar line for different tasks in a Gantt chart leads away from "displaying a first loop schedule for a first loop, wherein timing within the first loop schedule is presented relative to the first loop schedule," as recited in claim 1.

As to the second part of Marmel cited by the Examiner, the percentage complete feature of Figure 1-7 indicates actual progress towards completion for a task. The percentage complete feature provides status information entered by a manager or worker, not timing information. The task still follows the timing of the same single calendar line as the other tasks. This leads away from the above-cited language of claim 1.

The Examiner provides no precise location for the third cited part of Marmel. In any case, the Examiner's characterization appears to involve re-positioning within a single timing framework, which would lead away from the above-cited language of claim 1.

Elliott describes a Gantt chart for a WHILE loop [Elliott, Part III Loops, Figure 10], but the timing shown for the WHILE loop is also the timing of the overall schedule, which leads

KBR:kbr 08/09/04 298762
PATENT

Attorney Reference Number 1011-57071-01
Application Number 09/919,650

away from the above-cited language of claim 1. Elliott also describes a Gantt chart for a single-level loop [Elliott, Part I, Introduction and Terminology, Section 6.3 and Figure below Section 6.3.], which again does not teach or suggest the above-cited language of claim 1.

Claim 1 should be allowable.

Claim 3 recites "each of the top-level schedule and the first loop schedule includes an independently numbered set of control steps," and claim 4 recites "the first loop schedule begins with a control step 0 for non-real operations of the first loop schedule that execute in a clock cycle for a control step of the top-level loop schedule." Claim 10 recites, "timing within the first loop is independent of the different lengths of the plural branches." As noted above, Marmel and Elliott do not teach or suggest, "timing within the first loop schedule is presented relative to the first loop schedule," as recited in claim 1. Marmel and Elliott, taken separately or in combination, are even further from teaching or suggesting the above-cited language of claims 3, 4, and 10, respectively.

Claim 5 recites, "timing within the top-level schedule is presented as independent of latency of the first loop schedule." The Examiner alleges Marmel "teaches, in pages 50 and 51, elements containing an icon for displaying when the sub-elements are not expanded." [Office action, page 5.] Even if (for the sake of argument) this were true, "an icon for displaying when the sub-elements are not expanded" does not teach or suggest the above-cited language of claim 5. In fact, Marmel describes the durations of subtasks overriding and potentially changing the duration of a summary task [Marmel, pages 50-51], which leads away from the above-cited language of claim 5. Elliott also does not teach or suggest the above-cited language of claim 5.

Applicants will not belabor the merits of the separate patentability of the remaining dependent claims of claim 1. Dependent claims 2-11 should be allowable.

V. Each of claims 13-26 recites language that Marmel and Elliott, taken separately or in combination, fail to teach or suggest.

Claim 13, as amended, recites, "presenting second information for the sub-block of the design, wherein timing within the block is presented as independent of the number of timing steps of the sub-block." Marmel and Elliot, taken separately or in combination, fail to teach or suggest the above-cited language of claim 13.

KBR:kbr 08/09/04 208762
PATENT

Attorney Reference Number 1011-57071-01
Application Number 09/919,650

Against claim 13, the Examiner cites (1) the "9/3" and "8/27" labels of Marmel Figure 9-12, (2) the percentage complete feature shown in Marmel Figure 1-7, and (3) "selection of a sub-element" in Marmel causing time to be "displayed relative to the sub-element." [Office action, page 6.]

As to the first part of Marmel cited by the Examiner, Applicants do not see where Marmel describes "9/3 and 8/27 not being relative to the upper timeline but to its own line," as the Examiner writes. [*Id.*] Rather, the summary tasks associated with the "9/3" and "8/27" labels appear to follow the main calendar line, with "9/3" and "8/27" acting as description. Having summary tasks follow the timing of a single calendar line in a Gantt chart does not teach or suggest the above-cited language of claim 13.

As to the second part of Marmel cited by the Examiner, the percentage complete feature of Figure 1-7 indicates actual progress towards completion for a task. The percentage complete feature provides status information entered by a manager or worker, not timing information. The task still follows the timing of the same single calendar line as the other tasks. This does not teach or suggest the above-cited language of claim 13.

The Examiner provides no precise location for the third cited part of Marmel. In any case, the Examiner's characterization appears to involve re-positioning within a single timing framework, which also does not teach or suggest the above-cited language of claim 13.

Elsewhere, Marmel describes the durations of subtasks overriding and potentially changing the duration of a summary task. [Marmel, pages 50-51.] This involves integrating the presentation of durations for summary tasks and subtasks, and potentially increasing the duration of a summary task if the duration of one its subtasks increases, which leads away from the above-cited language of claim 13.

Elliott describes a Gantt chart for a WHILE loop [Elliott, Part III Loops, Figure 10], but the timing shown for the WHILE loop is the timing of the overall schedule, which does not teach or suggest the above-cited language of claim 13. Elliott also describes a Gantt chart for a single-level loop [Elliott, Part I, Introduction and Terminology, Section 6.3 and Figure below Section 6.3.], which again does not teach or suggest the above-cited language of claim 13.

Claim 13 should be allowable.

Claim 18, as amended, recites, "the icon appears in a clock overhead space of a timing step of the block schedule." As noted above, Marmel and Elliott do not teach or suggest, "timing

KBR:kbr 08/09/04 298762
PATENT

Attorney Reference Number 1011-57071-01
Application Number 09/919,650

within the block is presented as independent of the number of timing steps of the sub-block," as recited in claim 13. Marmel and Elliott are even further from teaching or suggesting the above-cited language of claim 18.

Claim 19 recites, "timing within the sub-block is presented relative to the sub-block," and claim 20 recites, "each of the block and the sub-block includes an independently numbered set of control steps." Against claims 19 and 20, the Examiner cites the "9/3" and "8/27" labels of Marmel Figure 9-12. [Office action, page 8.] The summary tasks associated with the "9/3" and "8/27" labels appear to follow the main calendar line, with "9/3" and "8/27" acting as description. Having a single calendar line for different tasks in a Gantt chart leads away from the above-cited language of claim 19. Marmel is even further from teaching or suggesting the above-cited language of claim 20. Elliott also fails to teach or suggest the above-cited language of claims 19 and 20, respectively.

Applicants will not belabor the merits of the separate patentability of the remaining dependent claims of claim 13. Dependent claims 14-26 should be allowable.

VI. Each of claims 27-30 recites language that Marmel and Elliott, taken separately or in combination, fail to teach or suggest.

Claim 27, as amended, recites, "each of the plural nested schedules including: a line of control step labels." Marmel and Elliot, taken separately or in combination, fail to teach or suggest the above-cited language of claim 27.

The Examiner does not specifically address the "line of control step labels" language of claim 27, but against claim 27 generally cites (1) the "9/3" and "8/27" labels of Marmel Figure 9-12, (2) the percentage complete feature shown in Marmel Figure 1-7, and (3) "selection of a sub-element" in Marmel causing time to be "displayed relative to the sub-element." [Office action, page 8.] None of these sections teaches or suggests "each of the plural nested schedules including: a line of control step labels," as recited in claim 27. Even if (for the sake argument), the labels for a Marmel Gantt chart calendar line were to be considered "control step labels" (which would be incorrect), there is only a single line of them, which leads away from the above-cited language of claim 27.

Claim 27 should be allowable.

KBR:kbr 08/09/04 298762
PATENTAttorney Reference Number 1011-57071-01
Application Number 09/919,650

Claim 28 recites, "presentation of each of the plural nested schedules other than the top-level schedule is in a clock overhead space of a control step of the schedule enclosing the nested schedule." Marmel and Elliott do not teach or suggest the "line of control step labels" language recited in claim 27. Marmel and Elliott, taken separately or in combination, are even further from teaching or suggesting the above-cited language of claim 28.

Applicants will not belabor the merits of the separate patentability of the remaining dependent claims of claim 27. Dependent claims 28-30 should be allowable.

VII. Applicants have added dependent claims 42-48.

Applicants have added dependent claims 42-48, which should be allowable.

CONCLUSION

All claims should be allowable. Such action is respectfully requested.

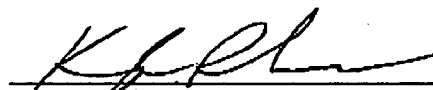
REQUEST FOR INTERVIEW

In view of the preceding amendments and remarks, Applicants believe the application to be allowable. If any issues remain, however, the Examiner is formally requested to contact the undersigned attorney at (503) 226-7391 prior to issuance of the next communication in order to arrange a telephonic interview. This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

Respectfully submitted,

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